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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,268	12/14/2001	Elisa M. Cross	57013US002	6070

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EXAMINER

NELSON, ALECIA DIANE

ART UNIT PAPER NUMBER

2675

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/017,268	Applicant(s) CROSS ET AL.	
	Examiner Alecia D. Nelson	Art Unit 2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-18 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. ***Claims 1-6 and 15-18*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Getz et al. (U.S. Patent No. 6,627,918) in view of Shiba et al. (U.S. Patent No. 6,245,469)

With reference to **claims 1**, Getz et al. teaches a method for making a touch activated user input device (60) comprising: providing a first substrate (10) comprising a first conductive coating (20); printing a plurality of dots (30) on the first conductive coating (see column 2, lines 21-29); hardening the dots to form spacers adhered to the

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first substrate (see column 4, lines 454-56); and placing a second substrate (40) comprising a second conductive coating (50) over the first substrate such that the spacers maintain a distance between the first and second substrates to prevent detection of a touch location when no external force is applied and allow detection of a localized touch location when a sufficient localized external force is applied between the first and second substrates (see column 4, line 64-column 5, line 24)

While Getz et al. teaches printing the plurality of dots by the screen printing method, Getz et al. fails to teach the usage of an ink jet for depositing the dots onto the substrates

Shiba et al. teaches forming spacers on a substrate of a display device by the usage of an ink jet (15) for depositing a curable resin composition (16) onto the transparent electroconductive film (11). Wherein it is stated that after curing and/or heating the spacers are formed in the trough holes (14) (see column 5, lines 48-56).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow the usage of the ink jet printing method as taught by Shiba et al. to be used to form the spacers of the device taught by Getz et al. in order to more accurately form the spacers when dispersed, thereby having a uniform thickness and reducing display defects that may occur due to a layer that is not uniformly dispersed.

With reference to **claims 2 and 3**, Getz et al. teaches that the dots are comprised of a nanocomposite comprising inorganic nanoparticles, wherein the nanoparticles include silica nanoparticles and hexanediol diacrylate (see column 2, line 65-column 3, line 16).

Referring now to **claims 4-6, and 16**, specifically with reference to **claim 6**, with while not specifically teaching that the nanoparticles have an average diameter in a range of about 10 to 30 nm, it is taught in Getz et al. that the spacer dot dimensions for width are about 125 microns to about 15 microns preferably about 100 microns to about 25 microns (see column 4, lines 45-52). However, according to the teachings given in the specification of the current application spacer dot diameters may be in the range of 20 to 200 micrometers. Wherein it is further stated that spacer dot heights may be adjusted depending on the desired application (see page 7, line 19-page 8, line 17). Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow the diameter of the nanoparticles to be in the range similar to that which is taught by Getz et al. in order to provide the appropriate diameter of the spacers to be used in the touch panel for improving the touch panel device. With references to **claims 4 and 5**, Getz and Shiba teaches all that is required as explained above with reference to **claim 1**, however while Getz et al. teaches that the nanocomposite comprises inorganic nanoparticles, neither Getz et al. nor Shiba et al. teaches the weight percentage of the nanoparticles present in the nanocomposite, however, by the same rationale given to the diameter of the spacers, it would also be obvious to one of ordinary skill in the art to allow the nanoparticles to be within the range of weight based on the applied application.

With reference to **claim 15**, Getz et al. teaches that the first and second conductive coatings each comprise a transparent conductive coating (see column 2, lines 23-29).

With reference to **claim 18**, Getz et al. teaches that the user touch input device is used with an electronic display (see column 1, lines 14-19).

4. **Claims 7-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Getz et al. in view of Shiba et al. as applied to **claims 1-6 and 15-18** above, and further in view of U.S. Application number 09/756312 (hereinafter '312).

With reference to **claims 8 and 9**, Getz et al. and Shiba et al. teaches all that is required as explained above, and while teaching ink jetting dots composed of a nanocomposite, there fails to be teachings of ink jet printing the plurality of dots by usage of a heated gel composition, wherein the gel is a nanocomposite gel.

'312 teaches a energy curable composition formulated with thickening properties such that the compositions tend to exist as a thickened fluid or gel and one state, but exist as a low viscosity fluid when subjected to a threshold level of suitable energy. Therefore the composition may be ink jetted as a low viscosity fluid when subjected to energy of the ink jet print head, but then quickly thicken or gelled after being printed to minimize dot gain (see page 4, line 25-page 5, line 1).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow a composition to be in the form of a gel as taught by '312

to be used as the composition in a device similar to that which is taught by Getz et al. and Shiba et al. in order to thereby provide more control when forming the dots on the touch panel.

With reference to **claim 10**, Getz et al. teaches that the dots are comprised of a nanocomposite comprising inorganic nanoparticles, wherein the nanoparticles include silica nanoparticles dispersed in an energy curable fluid vehicle (see column 2, line 65-column 3, line 16).

With further reference to **claims 7 and 11**, Getz et al. fails to teach the usage of hexandiol diacrylate material. However, the examiner takes Official Notice that the usage of such material is well known in the art for creating spacer dots. Moreover, it would be obvious to use such a material similar to the nanoparticles taught in Getz et al. to assist with hardening the composite when exposed to heat.

With reference to **claims 12-14**, specifically with reference to **claim 14**, with while not specifically teaching that the nanoparticles have an average diameter in a range of about 10 to 30 nm, it is taught that the spacer dot dimensions for width are about 125 microns to about 15 microns preferably about 100 microns to about 25 microns (see column 4, lines 45-52). However, according to the teachings given in the specification of the current application spacer dot diameters may be in the range of 20 to 200 micrometers. Wherein it is further stated that spacer dot heights may be adjusted depending on the desired application (see page 7, line 19-page 8, line 17).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow the diameter of the nanoparticles to be in the range similar to that which is taught by Getz et al. in order to provide the appropriate diameter of the spacers to be used in the touch panel for improving the touch panel device. With references to **claims 12 and 13**, while Getz et al. teaches that the nanocomposite comprises inorganic nanoparticles, neither Getz et al. nor Shiba et al. teaches the weight percentage of the nanoparticles present in the nanocomposite, however, by the same rationale given to the diameter of the spacers, it would also be obvious to allow the nanoparticles to be within the range of weight based on the applied application.

Response to Arguments

5. Applicant's arguments filed 6/22/05 have been fully considered but they are not persuasive. The applicant argues that there fails to be any motivation to establish the prima facie case of obviousness in the combination of the references used to reject the pending claims of the application, wherein it is stated that the rejection seems to rely on the mere fact that ink jet printing exists as a technique to make "spacers". While it is true that the usage of ink jet printing for creating spacer dots is a well known technique in the art, it is the examiner's belief that motivation to combine the references still exist without the knowledge of the well known usage of the ink jet printing technique. Specifically, the applicant states that due to the fact that Getz teaches the usage of silk screen printing and Shiba teaches the usage of through-holes into which the ink jet material is injected so that the size of the spacers can be controlled, there is not

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provided any suggestion to use that which is taught by Shiba as opposed to that which is taught by Getz. However, Getz teaches making the spacers by usage of a screening technique, wherein the spacer dots are produced by using a screen having a hole pattern for creating the spacers, wherein the material used for making the spacers are passed through the holes onto the surface which is later to be cured in order to dry the spacer dots (see column 3, line 17-column 4, line 67). Therefore, it would be obvious to one having ordinary skill in the art at the time of the invention to allow the usage of the ink jet printing as taught by Shiba, or by that which is well known in the art, wherein Getz teaches the usage of through holes for creating the spacers in order to create spacers of equal dimensions.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alecia D. Nelson whose telephone number is 571-272-7771. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 571-272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

adn/ADN
December 3, 2005


SUMATI LEFKOWITZ
SUPERVISORY PATENT EXAMINER